

J. Evered,

Water Wheel.

N^o 4,126.

Patented July 30, 1845.

Fig. 2.

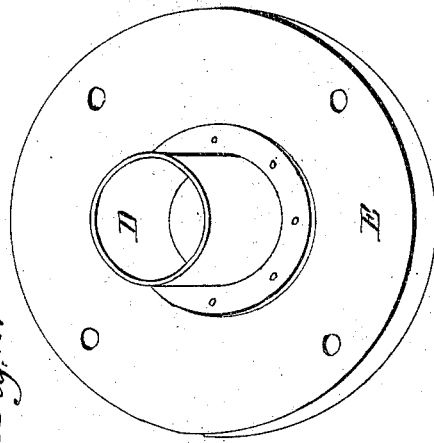
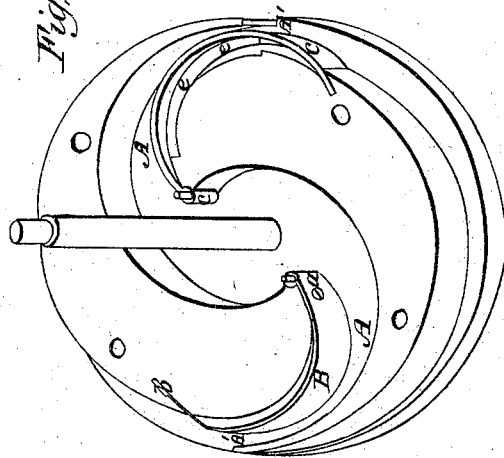


Fig. 1.



UNITED STATES PATENT OFFICE.

JOSHUA EVERED, OF SODUS, NEW YORK, ASSIGNOR TO ORIN W. SEELY.

IMPROVEMENT IN WATER-WHEELS.

Specification forming part of Letters Patent No. 4,126, dated July 30, 1845.

To all whom it may concern:

Be it known that I, JOSHUA EVERED, of Sodus, in the county of Wayne and State of New York, have made a new and useful Improvement in the Manner of Constructing a Reaction Water-Wheel; and I do hereby declare that the following is a full and exact description thereof.

It is a circumstance of frequent occurrence that the issues of reaction water-wheels become choked or obstructed by foreign matter entering them through the flume, and under the ordinary construction of such wheels there is much difficulty in removing such obstructions.

My improvement consists in adapting to each of the issues or water-ways of such wheels a spring-piece, or a piece that is acted on by a spring, which piece under ordinary circumstances determines the size of the openings of the issues, but which in case of any obstruction will give way by the increased pressure of the water and will allow the obstructing matter to escape therefrom, after which the spring or spring-piece will assume its former position.

In the accompanying drawings, Figure 1 is a perspective view of the interior of my water-wheel, the cap-plate or head shown in Fig. 2 being removed.

A A are the water-ways within the wheel, terminating in the issues A' A'. The inner side of each of the water-ways is made yielding, so that the issue may be enlarged to allow of the escape of foreign matter.

B is an elastic plate of metal bent into the proper form and of such width as to fill the space between the two heads of the wheel. At its outer end it is so bent as to be received into a slot as it springs back, as shown at *b*. This spring-piece is made so stiff as not to

yield under the ordinary pressure of the water when it is passing through the wheel, but to recede when the pressure is augmented by the obstructing of the issue, or it may readily be forced back by hand, should it under any circumstances become necessary so to do. Another modification of this part is shown at C, which consists of a plate of metal not constituting a spring, but hung on a joint-pin or otherwise hinged at its inner end *c*, a spring *e*, placed behind it, being used to force the piece C forward, rendering it substantially the same in operation with the spring-piece B. I have represented my wheel with two issues only, but do not intend to limit myself in this particular.

The water may be let into the wheel through the cylindrical opening D on the cap-piece or head E, fitted to a flume above it, through which the shaft F may rise, or the water may be conducted from the flume so as to enter on the lower side of the wheel, if preferred. The same principle of escape may also be applied to reaction-wheels with their axes placed horizontally, the water being let in on both sides of the wheel, as in some other reaction-mills.

Having thus fully described the nature of my improvement in reaction water-wheels, what I claim therein as new, and desire to secure by Letters Patent, is—

The manner of forming one side of the water-ways and issues of such wheels so that they shall yield and increase the width of the issue, for the purpose and in the manner herein set forth.

JOSHUA EVERED.

Witnesses:

THOS. P. JONES,
ELI W. BLAKE.